

Appl. No. 09/876,290
Amdt. Dated December 14, 2007
Reply to Office Action of June 14, 2007

REMARKS

Applicants respectfully request reconsideration of the Examiner's objections to the drawings set forth on page 2 of the Examiner's office action. In this portion of the Examiner's action, the Examiner has asserted that the drawings do not illustrate the lateral position restriction mechanism or sidewalls formed or comprised so as to rigidly restrict the semiconductor modules, two pairs of opposing side walls and two pairs of substantially parallel opposed sidewalls. Applicants respectfully submit that the two pairs of opposed sidewalls are clearly illustrated at the very least in Figures 2(D), 2(E), as well as Figures 3 and 4. Each of these illustrations is a cutaway side view which clearly illustrates at least one pair of opposed sidewalls which are of course the lateral restriction mechanism is described in claims.

Applicants note that the sidewalls are located at the left and right sides of the noted illustrations and that the sidewalls extend in a direction perpendicular to the surface of the paper. The remaining pair of opposed sidewalls is not shown in these illustrations because, as described in the specification, the box shaped structure would of course include the remaining pair of opposed sidewalls, but this portion has been cutaway from the illustration so that the internal portion of the assembly jig can be readily viewed.

Applicants respectfully submit that no drawing modification is required in light of the foregoing explanation. There should be no doubt that a person of ordinary skill the art with even the most basic understanding of engineering drawings having the specification in hand would readily understand that the illustration of the box-shaped structure as noted would include an additional pair of opposed sidewalls which are not shown because these are, of

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course cutaway side view illustrations. Applicants will gladly address this issue on appeal should the Examiner persist in this completely unfounded position. Applicants request that the Examiner consult with his supervisor regarding the drawing requirements in light of these comments. Furthermore, the undersigned hereby to the Examiner to contact him directly should there be any question whatsoever regarding the propriety of the current drawings of record. The same explanation applies to the Examiner's objection to the specification which should also be withdrawn in light of the foregoing comments.

Applicants have modified the claims for the purpose of more clearly indicating that the claims are currently directed to a physical structure. Applicants submit that the claim modifications overcome the Examiner's rejections under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Accordingly, in light of the foregoing, Applicants request that the Examiner withdraw the rejections under 35 U.S.C. § 101. For the same reasons, and in light of the claim modifications, Applicants request that the Examiner withdraw the rejections set forth by the Examiner under 35 U.S.C. § 112, second paragraph. The modified claims are very clearly not directed to both the manufacture and process of using the same.

In regard to the Examiner's rejection of the claims under 35 U.S.C. § 112, first paragraph, Applicants have modified the claims so that they now require that the assembly jig "rigidly restrict displacement ~~the deformation~~ of said semiconductor modules." Applicants respectfully submit that the modified claims fully comport with all of the requirements of section 112. Accordingly, Applicants respectfully request that the Examiner withdraw the rejections under 35 U.S.C. § 112, first paragraph. Applicants submit that these modifications

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also overcome the Examiner's rejections under 35 U.S.C. § 112 second paragraph. Accordingly, Applicants request that each of these rejections be withdrawn.

Applicants respectfully request reconsideration of the prior art rejections set forth by the Examiner under 35 U.S.C. sections 102 and 103. Applicants respectfully submit that the prior art references of record, whether considered alone, or in combination, fail to either teach or suggest Applicants' presently claimed invention. More specifically, Applicants' presently claimed invention is directed to an assembly jig that is used in the manufacture of electrical devices including a plurality of semiconductor modules having semiconductor chips electrically connected to a corresponding wiring board and wherein a plurality of the wiring boards and chips are stacked to form a unitary structure. Applicants assembly jig advantageously provides a unique and nonobvious structure for securing these devices during the manufacturing process.

Applicants respectfully submit that the Normington prior art reference provides no teaching or suggestion whatsoever regarding this advance in the art wherein individual wiring boards having at least one corresponding chip member connected thereto are stacked and interconnected with solder bumps between the wiring boards providing electrical communication between the wiring boards and chips in the stacked structure.

Applicants note that the Normington reference merely provides a semiconductor device including a stacked die wherein lead frames from a TAB tape having die attached thereto are curved and the free ends of the lead to curved back over themselves. The die and a separator attached to the die defines a pocket for receiving free ends of the leads. The die and a separator form a subassembly which combined with other subassemblies make a

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stacked structure. Sides having an array of conductive contact areas connected in a predetermined pattern are placed against the edges of the die to touch the curved leads which form a resilient contact with the sides.

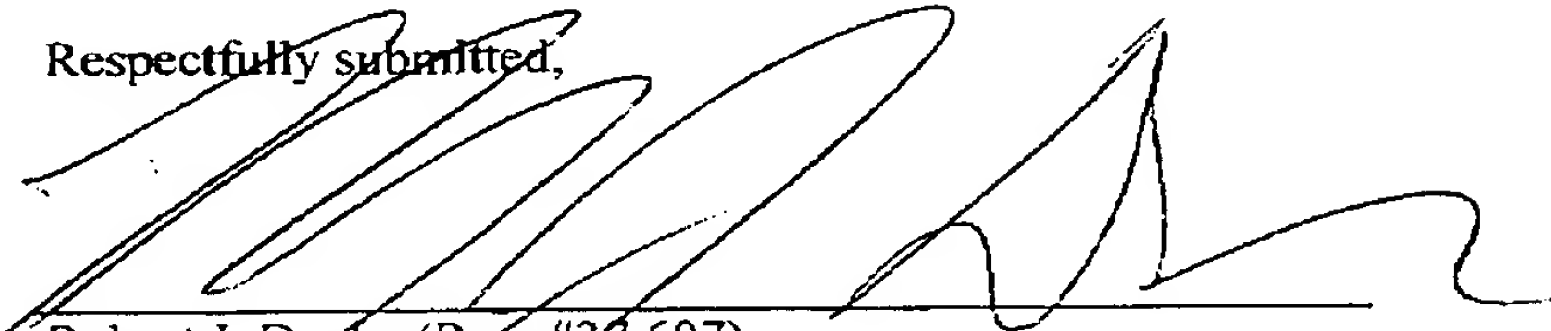
This structure is substantially different from Applicants' claimed invention. First, in this reference, semiconductor chips are not secured to wiring boards and there are no wiring boards stacked and connected by solder bumps forming connections between the wiring boards. In contrast with Applicant's invention, wherein the assembly jig is used for securing the physical relationship among a plurality of stacked wiring boards, it is the side wall structure of the device in the Normington reference which provides the electrical communication. This structure could not possibly be considered an assembly jig because the sidewalls of the structure actually provide the electrical communication and cannot be withdrawn as an assembly jig would normally be removed.

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Accordingly, in light of the foregoing, Applicants submit that the modified claims overcome each of the Examiner's rejections and are neither anticipated by nor obvious in light of any of the references of record.

Respectfully submitted,

Date: 12/14/07


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